EUTOR: An international collaboration for industrial-oriented practical training in robotics*

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INTRODUCTION

Origin
FIV-PAK collaboration since 1997
Extension in 2004/05
European Team Seminar on Robotics (**EuToR**)
Objectives to cover
internationality,
complementarity's background discipline,
teamwork mutual aid and communication,
industrial applications

Teams
German team from TUK:
students from mechanical and electronic engineering studies
Spanish team from UPV:
students from robotics and CAD specialization in computer science engineering studies

Project
Specified by a company (Sensus)
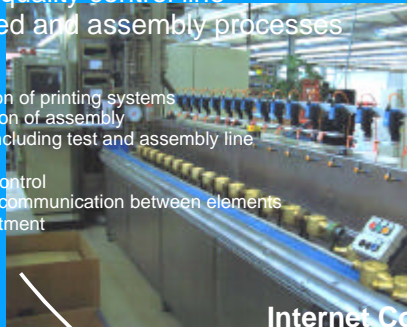
TECHNICAL PROJECT DEVELOPMENT AND ORGANIZATION

Quality Control Line for water meters
Analysis of quality control line
Study of future labelled and assembly processes

Tasks of the students:
·Conceptual design of integration of printing systems
·Conceptual design of automation of assembly
·Layout of quality control line, including test and assembly line
·Mechanical design of parts
·Material and information flow control
·Design of interconnection and communication between elements
·Calculation of necessary investment
·Planning of project realization
·Simulation of automated line

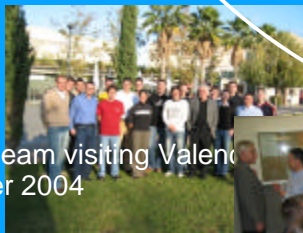Students from both teams during the final presentation to company engineers at Sensus

Internet Communication:
http://robotica.isa.upv.es/eutor
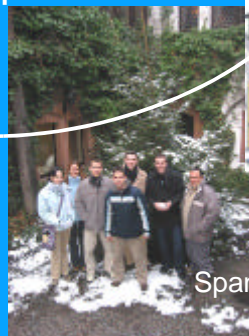
German team visiting Valencia November 2004

German students explaining the project to Spanish students

In the company factory

Spanish team visiting Kaiserslautern February 2005

STUDENT'S OPINION AND CONCLUSIONS

Students' comments in a pool:
· This project allowed us to face a real design of an application for a corporation, with the troubles it means, such as design and development decisions and having a deadline.
· We have exercised our group working capability so as individual effort coordination.
· It has given us the chance of having different points of view and to appreciate the differences between the German and the Spanish way of work.

Conclusions
An international industrial-oriented practical training project in automation and robotics involving:
- Cooperation between two national student teams (Germany & Spain)
- German company to study, analyse and work out an industrial problem
The activity has involved 13 German students and 6 Spanish ones, with 6 lecturers acting as tutors.
Main aspects pushed have been:,industrial projects, internationality, group working and cooperation of diverse engineer disciplines